Before the
Federal Communications Commission
Washington DC 20554

In the Matter of	)	
	)	WC Docket No. 17-108
Restoring Internet Freedom	)	

COMMENTS OF MITCHELL LAZARUS, *PRO SE*

I submit these comments in my own name. Positions expressed here may differ from those of my law firm and its clients.

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I respond here to *Restoring Internet Freedom*, WC Docket No. 17-108, Notice of Proposed Rulemaking, FCC 17-60 (released May 23, 2017) (*Notice*).

A. SUMMARY

This comment opposes the proposals in the *Notice*. The Commission captioned the proceeding "Restoring Internet Freedom," but the *Notice* would restore "Internet freedom" only to the facilities-based Internet service providers (ISPs), not to their customers.

At the same time, this comment opposes the present regulations on net neutrality. They fail to give clear guidance, leaving ISPs to "guess at what they are permitted and not permitted to do."[1] This is no fault of the draftsmen. To craft a net neutrality rule that plainly and consistently demarcates permitted from forbidden behaviors may not be feasible.

A better solution is to foster a competitive market for ISPs, in which a subscriber dissatisfied with an ISP's blocking or throttling or prioritizing content can go elsewhere. For the market to function, end users must be able to switch ISPs quickly and easily—

[1] *Notice* at ¶ 74.

something not presently possible. The Commission can promote such a market by retaining just enough Title II regulation to require that facilities-based ISPs (such as cable systems and telephone companies) open their systems and wires to competing ISPs, in exchange for fair compensation.

We often think of regulation as antithetical to the functioning of markets. Here, regulation is needed for the market to exist. Using Title II to further ISP competition will achieve the goals of net neutrality and serve the public interest.

About the author

Prior to his 33 years' of practice before the Commission, Mitchell Lazarus earned his living as an electrical engineer, psychology professor, education reformer, educational TV developer, and free-lance writer. Besides a law degree from Georgetown University Law Center, he holds master's and bachelor's degrees in electrical engineering from MIT and McGill University, respectively, and a Ph.D. in psychology and brain science from MIT. He is admitted to the practice of law in the District of Columbia and the Commonwealth of Virginia.

B. INFORMATION SERVICE AND TELECOMMUNICATIONS SERVICE

An information service generates, acquires, stores, transforms, processes, retrieves, utilizes, or makes available information.[2] Examples are Facebook, Wikipedia, and almost any other website.

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[2] "The term 'information service' means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service." 47 U.S.C. § 153(24).

A telecommunications service offers to the public, for a fee, the transmission of information of the user's choosing between points specified by the user, without changing its form or content.[3] An example is traditional wireline telephone service.[4]

Central to the net neutrality debate is the question of how these categories apply to Internet service. The most recent Commission ruling held broadband Internet access to be only a telecommunications service and not an information service.[5] Yet when an Internet user goes to the ISP's website and clicks a link, provision of the requested page is unmistakably an information-service function. The *Title II Order* evaded the issue by jiggering the definitions: it called the information-service activities "separate offerings that are not inextricably integrated with broadband Internet access service."[6] Conversely, though, earlier Commission orders had deemed broadband Internet access to be entirely an information service with no separate offering of telecommunications service.[7]

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[3] "The term 'telecommunications' means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 U.S.C. § 153(50.) "The term 'telecommunications service' means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used." 47 U.S.C. § 153(53).

[4] The Commission originally used the terms basic service (for telecommunications service) and enhanced service (for information service). Congress introduced the modern terms in the Telecommunications Act of 1996. The Commission found these to be synonymous with basic and enhanced, respectively. *Notice* at ¶ 41, *citing Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501 at ¶ 42 (1998). I use the modern terminology throughout.

[5] *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601 at ¶¶ 363–65 (2015) (*Title II Order*).

[6] *Title II Order* at ¶ 365.

[7] *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 at ¶ 14 (2005), *aff'd sub nom. Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007) (telephone wireline); *High-Speed Access to the Internet over Cable and Other*

Here I advance a simpler, less strained approach, formerly the Commission's own position. An ISP provides both information service (content) and telecommunications service (carriage). These combine to deliver the customer's Internet experience, but they do not overlap. The telecommunications service carries both the ISP's content offerings and the content of other, user-selected websites to the user's premises. Only this carriage component is subject to Title II. The component that provides and manipulates content is an information service not subject to Title II. An Internet customer inevitably sees the two as an integrated service: click the link; get the web page. The Commission can nonetheless cleanly separate the information and telecommunications components for regulatory purposes.[8]

For brevity, I will call the end user's combination of information service and telecommunications service simply "ISP service."

C. LEGAL PRECEDENT SUPPORTS EITHER TITLE I OR TITLE II REGULATION.

The Commission has discretion to regulate all of broadband Internet access as an information service under Title I, or as a telecommunications service under Title II. The Commission has done it both ways. The courts have supported the Commission both ways.

Facilities, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 at ¶ 7 (2002) (cable systems).

[8] The Commission has wide discretion on the treatment of these categories. *See NCTA v. Brand X Internet Services*, 545 U.S. 967, 992 (2005) (federal telecommunications policy in this technical and complex area to be set by the Commission). Separating the information and telecommunications components has support in the statutory definition of information service: "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information *via telecommunications* …." 47 U.S.C. § 153(24) (emphasis added).

The U.S. Supreme Court's *Brand X* decision upheld the Commission's treatment of cable-provided Internet service as an information service.[9] Fairly read, however, the opinion supports not that particular decision, but rather the Commission's authority to make the call. And indeed, a decade later the U.S. Court of Appeals relied on the same *Brand X* decision to affirm the opposite decision by a later Commission: to treat broadband Internet service as a Title II telecommunications service.[10] The Commission can do it either way.

Notwithstanding precedent to the contrary, the *Notice* tries to establish as a legal matter that ISP service cannot include telecommunications service. It advances several arguments. Three of these rely on statutory definitions.

The *Notice* asserts, first, that ISP service is not "between or among points specified by the user"—a requirement for telecommunications service[11]—because broadband Internet users do not specify the points between and among which information is sent.[12] This cannot be right. If it were, then even 1930s wireline telephony—the original *raison d'être* for Title II—would not qualify. Suppose a person in the 1930s calls a friend's phone number without knowing the precise geographic location of the friend's ringing phone. Under the *Notice*'s reasoning, that ignorance takes the call out of Title II. This makes no sense. When a broadband Internet user types a URL into the browser, he is in fact specifying a point of communication—the server corresponding to that URL—even though he may not know the server's physical whereabouts.

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9 *NCTA v. Brand X Internet Services*, 545 U.S. 967 (2005).

10 *United States Telecom Ass'n v. FCC*, 825 F.3d 674, 702 (D.C. Cir. 2016).

11 47 U.S.C. §§ 153(50), (53).

12 *Notice* at ¶ 29.

Second, the *Notice* observes that ISPs sometimes "change [] the form or content of the information as sent and received," which the definition says a telecommunications service may not do.[13] The *Notice* gives two examples: protocol processing to interconnect IPv4 and IPv6 networks, and the use of firewalls to block harmful content.[14] Long-distance telephony from the 1950s onward sometimes required conversion back and forth between wireline signals and microwave signals, and later, more integral changes between analog and digital formats. No one thought these behind-the-scenes technical processes made Title II inapplicable. Internet protocol conversion is similarly transparent to the end user. A reasonable construction of the definition would include protocol conversion as part of telecommunications service.[15] The definitions, after all, exist to serve policy goals, not the other way around. The *Notice*'s other example, the firewall function, is part of the information service provided by the ISP, and so falls outside the Title II analysis.

Third, the *Notice* construes the internal structure of certain definitions in Sections 230 and 231 of the Act as deeming ISP service not to be a telecommunications service.[16] These sections address the specific problems of immunizing ISPs that may carry offensive content (Section 230) and of Internet material that is harmful to minors (Section

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13 47 U.S.C. §§ 153(50), (53).

14 *Notice* at ¶ 30.

15 The question of protocol conversion arose soon after the Commission first made the distinction between telecommunications service and information service (then still called basic service and enhanced service, respectively). The Commission allowed basic service to include protocol conversion by waiver. *Petitions for Waiver of Rules Filed by Pacific Bell, et al*., 100 F.C.C.2d 1057 (1985). The analysis might be a little different today, the definitions having since been codified in the statute, but should reach the same result.

16 *Notice* at ¶¶ 31-32.

231). These sections do not purport to regulate any other aspect of the Internet. The definitions they include are best read as relating only to the sections in which they appear, not supplanting the overall definitions in Section 153. If Congress had meant these definitions to have general applicability, it would have put them among the other general definitions in Section 153.

Fourth, the *Notice* finds Title II to be a "poor fit" for broadband Internet access service because the 2015 *Title II Order* forbore from applying most of Title II.[17] The conclusion does not follow from the premise. The Commission has largely forborne from regulating other common carrier services—such as mobile telephony—without questioning their status under Title II. Below, I will propose that the Commission extend this practice by maintaining the Title II classification for the carriage component of broadband ISP service while forbearing from all but one regulatory provision.

In sum, neither the case law nor the Act compels the Commission to find that ISP service is solely an information service having no telecommunications component. Neither do the authorities require that ISP service be a telecommunications service. The regulatory classification of ISP service is for the Commission to decide as a question of policy, not a matter of law.

D. UNREGULATED NEAR-MONOPOLIES IN ESSENTIAL SERVICES ARE BAD POLICY.

Twenty-five years ago the Internet was a curiosity barely known outside the core tech community. That began to change in the early 1990s with the appearance of the World Wide Web, which made the Internet more accessible to people with no technical

[17] *Notice* at ¶ 33.

training or interests.[18] Society reorganized around fast, ubiquitous digital communications. Teachers began putting homework assignments online. Governments invited citizen contact through the Internet. Large employers required online job applications. Newspaper and magazines ceased print production while online publications flourished.

Today, it is hard to overstate the Internet's indispensability to Americans' life and work. A few examples:

- education at all levels, from elementary school through college and post-graduate studies, for research, communication with teachers and classmates, and online degree programs;
- access to health care: obtaining and managing health insurance, making appointments, communicating with medical personnel, obtaining test results, and managing prescriptions;
- banking and bill-paying (some banks offer zero-fee accounts to online-only users); managing pensions and investments;
- applying for employment;
- earning a living, including collaboration, telecommuting, webinars, data look-up, and office-free positions that require work from home;
- access to government services such as Social Security and Medicare; participation in local government; tax preparation and payment of taxes;
- arranging travel;
- contact with houses of worship; supporting charities;
- shopping for necessities such as food, clothing, and health needs;

[18] The term "World Wide Web" (or simply the "Web") is sometimes used as a synonym for the Internet, but in fact it is an application that runs on the Internet. (Email is another.) The Web allows easy navigation through the Internet by clicking links. Earlier, more difficult to use Internet tools like "Gopher" and "finger" are all but forgotten.

- maintaining hobbies; creating and disseminating poetry, literature, photography, video, music, and other works of art;
- access to news, weather, sports, etc.; civic discourse;
- staying in touch with loved ones; and
- (of course) entertainment.

It has become difficult to function—even to go to school or get a job—without access to the Internet. ISP service is as much a necessity as electricity and water. Users have no choice but to accept ISP service on whatever terms and conditions the local ISPs choose to offer. This would not be a problem if Internet users had a ready choice among multiple ISPs, as (for example) most food buyers have a ready choice among super-markets. But because Internet users do not have such a choice, ISPs are free to act in their own interests, rather than in the interests of their subscribers and society generally.

A for-profit ISP—nearly all of them are—owes an obligation to its stockholders that can conflict with best outcomes for subscribers. In a much-cited example, some large ISPs are operated by cable systems whose paid video services compete with online providers such as Netflix and Hulu. These companies have financial incentives to impair the delivery of competing services. A cable ISP that delivers Netflix at the same speed and quality as its own offerings, or that turns down payments from providers for fast-lane delivery, is leaving stockholders' money on the table. The ISPs routinely promise not to take advantage of their control over Internet access, and to be sure, there have been few reported abuses. Still, it cannot be good policy for essential services to depend on ISPs' unenforceable promises.

ISPs have exploited their near-monopoly position more openly in another way: they warned the previous Commission that its reclassifying broadband ISP service as

Title II would deter their investment in new facilities. More crudely: do it our way or people won't get good Internet service. The *Notice* adopts this argument, in arguing against continued regulation on the ground that ISPs reduced their investment because of Title II classification.[19]

A detailed study by Free Press found the opposite: total capital investment by publicly traded ISPs was 5% higher during the two years following the Title II vote than it was in the two years prior; and capital investments were higher at 16 of the 24 publicly traded ISP firms (or units) following the vote.[20] All publicly traded ISPs continued to increase broadband-network capacity.[21] Free Press concludes: "The restoration of Title II … had no negative impact on broadband industry investments."[22]

The ISPs trade on their grip on the broadband ISP market for leverage to maintain that grip. General Motors may protest an EPA standard for gasoline mileage, but it does not threaten to stop making cars—and if it did, the EPA would shrug; people can buy other companies' cars. The ISP threat to stop expanding facilities can intimidate the Commission only because so few ISPs serve any given market. The threat, and the market power behind it, should raise an alarm. It is disturbing to see the Commission instead adopt and promote that threat as a ground for deregulation.

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19 *Notice* at ¶¶ 45-46.

20 S. Derek Turner, *It's Working: How the Internet Access and Online Video Markets are Thriving in the Title II Era* at 4, Free Press (May 2017), https://www.freepress.net/sites/default/files/resources/internet-access-and-online-video-markets-are-thriving-in-title-II-era.pdf

21 *Id*. Declines, according to Free Press, were uniformly due to completion of cyclical upgrades. *Id*. Census Bureau data, which includes non-publicly-traded ISPs, shows similar results. *Id*. at 5.

22 *Id*. at 5.

E. THERE IS NO FUNCTIONING MARKET FOR FACILITIES-BASED BROADBAND ISP SERVICE.

Most Internet users have little choice among broadband ISPs. Almost nine-tenths of census blocks have two or fewer broadband providers.[23] Over half have only one broadband provider or none at all.[24] When two are available, they are typically a cable company and a telephone company. Some densely populated, affluent markets also have a third-party "overbuild" provider.[25]

There have been promises over the years of additional competition. Broadband-over-power-line was to have been the "third wire," but long ago ceased offering retail service. Cities in the mid-2000s sought to provide free municipal Wi-Fi, but today few do, owing in part to opposition from traditional ISPs.[26] Coffee shops and other retailers offer "free" Wi-Fi for customers, but paying for Internet access with a two-dollar cup of coffee every day adds up to sixty dollars a month—hardly free; and this option is closed to many who lack good transportation. Nationwide fiber-to-the-home looked like another good possibility until it, too, failed. FIOS, by far the most successful offering, topped out at passing just one in eight U.S. residents.[27] Google Fiber gets excellent reviews but is

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[23] *Internet Access Services: Status as of June 30, 2016*, Industry Analysis and Technology Division, Wireline Competition Bureau at 6, Figure 4 (April 2017). The cited data rely on the Commission's definition of broadband: at least 25 Mbps download and 3 Mbps upload. *FCC Finds U.S. Broadband Deployment Not Keeping Pace, Updates Broadband Speed Benchmark to 25Mbps/3 Mbps to Reflect Consumer Demand, Advances in Technology*, FCC News Release (released Jan. 29, 2015).

[24] *Internet Access Services: Status as of June 30, 2016*, Industry Analysis and Technology Division, Wireline Competition Bureau at 6, Figure 4 (April 2017).

[25] Only 13% of census blocks have at least three providers. *Id*.

[26] *Whatever happened to municipal Wi-Fi?* The Economist (July 26, 2013), https://www.economist.com/blogs/babbage/2013/07/wireless-networks

[27] *What Billions In Subsidies Bought: The Final Map Of Verizon's FiOS Fiber*, Techdirt (Jan. 26, 2015), https://www.techdirt.com/blog/netneutrality/articles/20150126/04502529814/what-

available in only a small handful of cities, and announced last year it would suspend further buildout.[28] Wireless ISPs using unlicensed spectrum serve some deep-suburban and rural users, but are not well suited to more densely populated areas. Mobile 4G once looked like an alternative, but the high cost of data packages rule it out as a substitute for wired ISP service. A new Broadband Access Coalition recently proposed Internet service using licensed wireless facilities in the 4 GHz band,[29] but the band is presently in use and other proposals for it are circulating.[30]

Even if there were multiple ISP options, barriers to changing from one to another still render a market non-competitive. Moving to a new ISP often requires a technician on site to make the connection, so the customer must forgo other activities to wait at home. Usually the customer must also purchase a new modem (or the equivalent), either in a lump sum or, in the case of "free" equipment, through monthly charges. A potentially serious barrier to change is loss of the ISP-provided email address. A subscriber whose primary email address ends in verizon.net or comcast.net (or the like) may be permanently locked in. Health-care providers reach the subscriber through that address, as do banks, food delivery, insurance, pension companies, essential social services … and

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billions-subsidies-bought-final-map-verizons-fios-fiber.shtml FIOS is also adding a few neighborhoods in Boston, but not enough to significantly move the percentage numbers.

[28] *Advancing our amazing bet*, Google fiber Official Blog (Oct. 25, 2016), https://fiber.googleblog.com/2016/10/advancing-our-amazing-bet.html

[29] Petition for Rulemaking of the Broadband Access Coalition, RM-11791 (filed June 21, 2017).

[30] *See Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, GN Docket No. 17-183, Notice of Inquiry, FCC-CIRC1708-04 (not yet released), pre-release at http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0713/DOC-345789A1.pdf. *See also* Michael O'Rielly, *A Mid-Band Spectrum Win in the Making*, FCC Blog (posted July 10, 2017), https://www.fcc.gov/news-events/blog/2017/07/10/mid-band-spectrum-win-making

family and friends. Most of us receive important emails from automated systems. Updating all those email correspondents to a new address is difficult for anyone. For an elderly or unsophisticated subscriber, it may be impossible.

ISPs frequently make limited-time, low-price, introductory offers, typically for a year, after which rates go up. Ostensibly the offer lets a new customer try out and appreciate the service. The ubiquity of these offers suggest they must work, perhaps in part because it is so hard to change providers once the introductory period is over.[31]

F. COMPETITION AMONG ISPS ELIMINATES THE NEED FOR NET NEUTRALITY RULES.

1. The Computer Inquiry proceedings

Opponents of net neutrality rules like to say the Internet grew up and flourished free of regulation. This is wrong. The Commission closely regulated ISP data transport from the Internet's first appearance until 2005.[32]

In the 1970s, when computers were still expensive (and long before the public Internet), a new industry offered remotely-provided computer services, such as accounting services for small companies. Data went back and forth between the customer and the provider's computers over ordinary telephone lines. AT&T and the other local

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[31] For comparison, the market for *mobile* broadband Internet service is far more competitive. Congress helped by permitting handsets to be unlocked for the purpose of changing providers. *Unlocking Consumer Choice and Wireless Competition Act*, Pub. L. No. 113-144 (enacted Aug. 1, 2014). Many markets have multiple smaller providers along with the four major nationwide carriers. A consumer can change wireless phone companies online or with a store visit much more easily than changing wired ISPs.

[32] Even the Commission made this error. "*Myth: Title II regulations are necessary to preserve a free and open Internet*. Fact: The Internet was free and open prior to the FCC adopting Title II regulations in 2015." *Internet Regulation: Myths vs. Facts*, Office of the Chairman (released April 26, 2017), https://apps.fcc.gov/edocs_public/attachmatch/DOC-344591A1.pdf (original italics and underline).

telephone companies were ideally positioned to be providers. They could collocate the data processing functions in the same computers that switched phone calls, while competitors had to obtain separate computers, and also rent lines from the telephone companies at tariffed rates for data transport. The Commission feared the telephone companies' price advantage would give them an unearned monopoly and freeze others out of the industry.

The Commission's first practical solution was the 1980 *Computer II* decision.[33] This conceptually divided remote computing service into two components: the pure transport of data, and the data processing function: what we now call telecommunications service and information service. The Commission required AT&T (but not the smaller companies) to provide information service—if it chose to do so—through an unregulated separate subsidiary, which had to buy telecommunications service under tariff from its regulated affiliate. This put AT&T on the same footing as other remote-computing companies and eliminated its competitive edge.

The break-up of AT&T occurred at the beginning of 1984. In preparation, the Commission transferred AT&T's *Computer II* obligations to the Bell Operating Companies (BOCs) that would take over AT&T's provision of local service.[34]

The subsequent *Computer III* proceeding inverted the *Computer II* approach. The BOCs could now provide information services through the regulated company, but only

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[33] *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Final Decision, 77 F.C.C.2d 384 (1980) (subsequent history omitted).

[34] *Policy and Rules Concerning the Furnishing of Customer Premises Equipment, Enhanced Services and Cellular Communications Equipment by the Bell Operating Companies*, Report and Order, 95 FCC 2d 1117 at ¶ 3 (1983) (subsequent history omitted).

if they gave competing providers access to specified components of their networks and lines.[35] In principle, at least, this gave competing providers the same collocation benefits that had previously been available only to the telephone companies. The public gained from removal of the artificial inefficiencies that *Computer II* had imposed, which made possible lower rates.

2. Proliferation of ISPs

The public Internet arose in the early 1990s.[36] For the first decade and more, subscribers used dial-up modems on ordinary voice telephone lines. Whether by the Commission's prescience or good luck, *Computer III* provided an ideal regulatory environment for the Internet's emergence. Any ISP could offer its customers efficient service by collocating in the BOCs' networks.[37]

The arrangement made for easy entry into the ISP business. As a result, dial-up Internet users had a wide choice. About 5,000 ISPs operated in the United States, ranging in size from national companies like Netcom down to small-town local operations. In the mid- and late 1990s I co-represented a coalition of small ISPs. Some were mom-and-pop businesses run out of a spare bedroom with servers in the linen closet. Some ISPs specialized in serving doctors' offices, real-estate companies, law firms, Christian families, or local tradesmen. Some limited access to family-friendly websites; others promised everything on the Internet. One ISP in my coalition specialized in service to the

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35 *Amendment of Section 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry)*, Report & Order, 104 F.C.C.2d 958 (1986) (subsequent history omitted). The account here simplifies a complex set of rules.

36 Scholars differ on the date. One useful marker is the appearance of Mosaic, the first World Wide Web browser to gain widespread use, in 1993.

37 In practice, some of the BOCs resisted ISPs' efforts to collocate.

elderly: it would send a staff member to the customer's house to install the modem, set up the software, and help the customer master its use.

Because all ISPs could use the subscriber's telephone line, changing from one to another took just a phone call, with no new connection or new equipment.

3. Regulating net neutrality

The regulatory environment of *Computer III* precluded net neutrality as a concern, in the dial-up days. A customer unhappy with how an ISP blocked or favored content could simply change ISPs.

The Commission previous to this one sought to achieve net neutrality a different way: by writing rules on how ISPs manage content. This turns out to be difficult. A good rule draws a sharp line between permitted and non-permitted behavior: NO TURN ON RED. KEEP FROZEN TILL USED. EMPLOYEES MUST WASH HANDS. Contrast those with a key net neutrality provision:

> Any person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not unreasonably interfere with or unreasonably disadvantage end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or edge providers' ability to make lawful content, applications, services, or devices available to end users. Reasonable network management shall not be considered a violation of this rule.[38]

This language says an ISP's interfering with content or disadvantaging users is permitted if not "unreasonable." The concept of unreasonableness is well understood in some areas of the law. A lease might provide that the lessor cannot "unreasonably"

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[38] 47 C.F.R. § 8.11.

withhold consent to a sublease. Generations of case law tell us what this means. In the net neutrality context, though, we simply don't know what ISP actions are impermissible.

Hoping to clarify the standard, the Commission added several paragraphs of commentary titled "Factors to Guide Application of the Rule."[39] These factors are: end-user control; competitive effects; consumer protection; effect on innovation, investment, or broadband deployment; free expression; application agnostic; and standard practices. Rather than narrowing what the rule does and does not allow, however, the commentary opens additional avenues for a demanding end user to argue that an ISP is out of compliance, or conversely, for the ISP to argue it is in compliance after all.

The Commission announced it would address disputes on "a case-by-case approach, considering the totality of the circumstances."[40] This would not be a bad thing if decisions came quickly enough to inform other parties' conduct. Based my own experience with interparty disputes at the Commission, however, and allowing for internal appeals, we can optimistically hope for something like a two-year turnaround at best. That is forever, in Internet time. Any guidance that might come from these decisions would arrive much too late, long after the problems that caused them had evolved into entirely new species.

One alternative to vague rules—more specific rules—is even less appealing. Nobody wants the government meddling in the details of ISP internal operations.

There is a practical alternative: to reach the goal of net neutrality the same way the Commission did in the 1990s, by fostering real competition among ISPs.

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39 *Title II Order* at ¶¶ 138-45.

40 *Id*. at ¶ 138.

G. PROPOSAL: MANDATORY SHARING OF ISP FACILITIES

For a truly competitive ISP market, one in which a customer can switch easily among multiple providers, multiple ISPs must share the physical channels of communication into the customer's premises. The Commission can bring this about by (1) maintaining a Title II regime for broadband Internet access; (2) forbearing nonetheless from all Title II regulation except … (3) imposing a requirement that facilities-based ISPs open their facilities to competing ISPs.

Real competition should deter feared abuses, such as cable-system ISPs favoring their affiliates' offerings by impairing the delivery of competing providers. Customers wanting a better-quality signal for Netflix and Hulu can just change ISPs. Similarly, an ISP that blocked or throttled sites that people wanted would lose subscribers to ISPs that made those sites available. Overall, competition among ISPs should force prices down and quality up.

Facilities-based ISPs should not have to share their capacity free of charge. The Commission can develop a formula for compensation that fairly covers competitors' share of costs, including amortization of construction, maintenance, interconnection costs, and a reasonable profit. This is not rate regulation, but just a set of guidelines to ensure fair treatment of both facilities-based ISPs and competitive ISPs.

Facilities-based ISPs may still disfavor this proposal. No one wants new competition. The ISPs no doubt will cite other grounds for opposition, but the economics may be a factor. Even indemnification of costs and a fair profit on shared facilities may not make up for the loss of near-monopoly benefits. If true, though, that is all the more reason for the Commission to make competition possible.

The ISPs might argue that, having built facilities with their own funds, they are entitled to retain control over how they are used. The Commission can answer that the cable companies and phone companies developed their facilities under protective regulation while receiving benefits such as access to rights of way and rate-regulated pole attachments. Whether they have the right to preserve their near-monopoly status in a different market that might otherwise be competitive is a question for the Commission to decide.

Open Issues

This proposal is only a rough outline. Some of the issues it raises will take a Further Notice of Proposed Rulemaking to explore. They include:

- technical details of connectivity (likely to be different for cable systems *versus* DSL *versus* fiber, etc.);
- mechanisms for competitive ISPs to request and commence carriage;
- formulas to compensate facilities-based ISPs for sharing of their facilities, and mechanisms for the fair implementation of those formulas;
- protection of subscribers' personal information in a shared environment; and
- whether a competing ISP can freely choose which incumbent provider to carry its signal—and whether that remains true after multiple ISPs have chosen, say, the cable system and none have chosen the telephone company.

The Commission will also have to decide which facilities-based ISPs should be exempt from the sharing requirement. I suggest the following candidates:

- ISPs serving fewer than some number of subscribers (to be determined); [41]
- wireless ISPs using unlicensed spectrum;
- mobile carriers (because that market appears to be competitive); and
- overbuild Internet providers affiliated with neither incumbent cable systems nor telephone companies.[42]

CONCLUSION

Someone will always be in a position to control end users' access to Internet content. An earlier Commission tried to exert that control itself through net neutrality rules. The present Commission favors leaving it to the facilities-based ISPs.

The value of net neutrality—of removing ISPs' control over content—is not in dispute. The debate is over how best to achieve it: by direct regulation, or by trusting the ISPs' goodwill. There is a third, proven route: the Commission should adopt rules that require facilities-based ISPs to share their equipment and lines with competing ISPs.

There are no legal barriers to this approach. It worked in the past, and will work again today.

Respectfully submitted,

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41 The *Computer II* and *Computer III* requirements applied only to AT&T and, later, the Bell Operating Companies, not to the smaller telephone companies.

42 These companies risk their own funds to go up against powerful incumbents in the service of competitive goals. They should not be asked to do more.